

**REMARKS**

Claims 1-22 and 24 are pending in this application. Non-elected claims 11-19 have been withdrawn from consideration by the Examiner. By this Amendment, claim 1 is amended. Support for the amendments to claim 1 may be found, for example, in the specification at paragraphs [0087] and [0088]. No new matter is added.

In view of the foregoing amendments and following remarks, Applicants respectfully request reconsideration and allowance.

**I. Telephone Interview**

The courtesies extended to Applicants' representative by Examiner Abraham during the interview held February 8, 2010, are appreciated. The reasons presented during the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview.

**II. Rejections Under 35 U.S.C. §103**

**A. Janjic and Sozio**

The Office Action rejects claims 1, 3, 4, 7, 8, and 20-22 under 35 U.S.C. §103(a) over U.S. Patent No. 3,934,348 to Janjic et al. ("Janjic") and U.S. Patent No. 4,585,417 to Sozio et al. ("Sozio"). Applicants respectfully traverse the rejection.

Claims 1 and 7 would not have been rendered obvious by the combination of Janjic and Sozio for at least the following reasons.

**1. Porcelain Viscosity**

Claim 1 recites, *inter alia*: "wherein the second porcelain is constituted principally by ceramic whose composition is different from that of the ceramic of the first porcelain such that a viscosity of the second porcelain at the casting temperature is lower than that of the first porcelain." Claim 7 similarly recites: "wherein viscosity of the second porcelain at a casting

temperature is lower than that of the first porcelain." The combination of Janjic and Sozio would not have rendered obvious these features.

The Office Action asserts at page 4 that in Janjic, "the viscosity of the second layer must be lower than the infinite viscosity of the first layer." However, as discussed during the interview, Janjic does not necessarily teach that the viscosity of the second porcelain at a casting temperature is lower than that of the first porcelain.

In support of this position, Applicants submit herewith a Declaration Under 37 C.F.R. §1.132 by Mr. Sumihito Sago. Pages 3-4 of the Declaration, and Materials I-III submitted therewith, describe three different porcelains and their viscosities at varying temperatures. Glass 1(SBS) and the ingot have a uniform difference in viscosity as the temperature increases. See Material I. However, Glass 1 and Glass 2 surprisingly do not have a uniform difference. See Material II. Instead, in the range from 850-1000°C, Glass 2 has a larger viscosity than Glass 1; and in the range from 1000-1200°C, Glass 1 has a larger viscosity than Glass 2. Thus, these examples show that the premise upon which the Office Action rejects the above-described feature is inaccurate. In other words, the "viscosity of the second porcelain at the casting temperature is lower than that of the first porcelain" as recited in claims 1 and 7 would not have been obvious in view of Janjic.

Sozio does not, nor is it asserted to, cure at least this deficiency. Accordingly, for at least the above described reasons, claims 1 and 7 would not have been rendered obvious by Janjic and Sozio.

## **2. The Casting Process**

Claim 1 also recites:

a step of forming a cast coating layer on at least a part of a surface of the back coating layer, by pouring a ~~softened~~ second porcelain, which is held by a ceramic holding portion provided with the casting mold and is softened by heating with the casting mold, into the void of the casting mold via the

porcelain introducing passage under pressure ~~at using the~~  
casting mold heated to a casting temperature to form at least  
two coating layers including the back coating layer and the cast  
coating layer on the surface of the substrate.

Neither Janjic nor Sozio disclose, nor would their combination have rendered obvious, such a combination of features,. Among other things, the references fail to teach or suggest that the second porcelain (1) is poured "into the void of the casting mold via the porcelain introducing passage under pressure" (emphasis added) and (2) "is held by a ceramic holding portion provided with the casting mold and is softened by heating with the casting mold" as recited in claim 1. As discussed during the interview, these features would not have been obvious in view of Janjic and Sozio.

In further support of this position, the Declaration at pages 5-7 describes in detail the casting process and includes references to The Technical Instructions for CZR Press (2009) ("Material IV"), which describe a now-marketed method of forming a dental prosthesis having two decorated layers where the upper layer is formed by the above described casting method. The casting method would not have been rendered obvious by the applied references.

Claims 1 and 7 would not have been rendered obvious by the combination of Janjic and Sozio. Claims 3, 4, 8, and 20-22 variously depend from claim 1 or claim 7 and, thus, also would not have been rendered obvious by Janjic and Sozio. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

**B. Janjic, Sozio, and Fukuda**

The Office Action rejects claims 2 and 24 over 35 U.S.C. §103(a) over Janjic, Sozio, and JP-06-269466 to Fukuda et al. ("Fukuda"). The deficiencies of Janjic and Sozio with respect to claim 1 is discussed above. Fukuda, which is only relied upon by the Office Action for its alleged disclosure of the additional limitations recited in claims 2 and 24, at least fails

to cure the deficiencies of the combination of Janjic and Sozio with respect to claim 1. As such, the combination of Janjic, Sozio, and Fukuda fails to teach or suggest each and every limitation of claim 1. Accordingly, the subject matter of claim 1 cannot be fairly considered to have been rendered obvious by the combined teachings of Janjic, Sozio, and Fukuda.

Claims 2 and 24 variously depend from claim 1 and, thus, require all the limitations of claim 1, respectively. Thus, for at least the reasons discussed above, claims 2 and 24 would not have been rendered obvious by the combined teachings of Janjic, Sozio, and Fukuda. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

**C. Janjic, Sozio, and Sekino**

The Office Action rejects claims 6 and 10 over 35 U.S.C. §103(a) over Janjic, Sozio, and U.S. Patent No. 6,740,267 to Sekino et al. ("Sekino"). The deficiencies of Janjic and Sozio with respect to claims 1 and 7 are discussed above. Sekino, which is only relied upon by the Office Action for its alleged disclosure of the additional limitations recited in claims 6 and 10, at least fails to cure the deficiencies of the combination of Janjic and Sozio with respect to claims 1 and 7. As such, the combination of Janjic, Sozio, and Sekino fails to teach or suggest each and every limitation of claims 1 and 7. Accordingly, the subject matter of claims 1 and 7 cannot be fairly considered to have been rendered obvious by the combined teachings of Janjic, Sozio, and Sekino.

Claims 6 and 10 variously depend from claims 1 and 7 and, thus, require all the limitations of claims 1 and 7, respectively. Thus, for at least the reasons discussed above, claims 6 and 10 would not have been rendered obvious by the combined teachings of Janjic, Sozio, and Sekino. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

**D. Janjic, Sozio, and Brodkin**

The Office Action rejects claims 5 and 9 over 35 U.S.C. §103(a) over Janjic, Sozio, and U.S. Patent No. 6,428,614 to Brodkin et al. ("Brodkin"). Applicants respectfully traverse the rejections for at least the following reasons.

As discussed during the interview, claims 5 and 9 would not have been rendered obvious by the applied references because they does not teach or suggest all the additional features recited in these claims. The Office Action recognizes at page 11 that Janjic and Sozio does not teach or suggest the features recited in claims 5 and 9. However, it asserts that Brodkin cures these deficiencies. Applicants respectfully disagree.

Claims 5 and 9 recite percentage contents for the first and second porcelains as set forth *supra*. Brodkin discloses some kinds of porcelain compositions. *See, e.g.*, Brodkin at Table 3. However, Brodkin at least does not disclose the second porcelain recited in claims 5 and 9 having MgO as an essential component because the opaque porcelain shown in Table 3 is different. In addition, the second porcelain is the cast porcelain, not the opaque porcelain and should be instead compared with a body and incisal porcelain shown in Table 3. One of ordinary skill in the art would have recognized that body and incisal porcelain is different from cast porcelain.

In addition, the deficiencies of Janjic and Sozio with respect to claims 1 and 7 are discussed above. Brodkin, which is only relied upon by the Office Action for its alleged disclosure of the additional limitations recited in claims 5 and 9, at least fails to cure the deficiencies of the combination of Janjic and Sozio with respect to claims 1 and 7. As such, the combination of Janjic, Sozio, and Brodkin fails to teach or suggest each and every limitation of claims 1 and 7. Accordingly, the subject matter of claims 1 and 7 cannot be fairly considered to have been rendered obvious by the combined teachings of Janjic, Sozio, and Brodkin.

Claims 5 and 9 depend from claims 1 and 7 and, thus, require all the limitations of claims 1 and 7, respectively. Thus, for at least the reasons discussed above, claims 5 and 9 would not have been rendered obvious by the combined teachings of Janjic, Sozio, and Brodtkin.

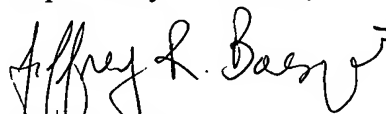
Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

### **III. Conclusion**

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Applicants earnestly solicit favorable reconsideration and prompt allowance of the application.

Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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**Attachments:**

Declaration Under 37 C.F.R. §1.132  
Materials I-IV

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